11/29/06

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NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	AUG 09	INSPEC enhanced with 1898-1968 archive
NEWS 4	AUG 28	ADISCTI Reloaded and Enhanced
NEWS 5	AUG 30	CA(SM)/CAplus(SM) Austrian patent law changes
NEWS 6	SEP 11	CA/CAplus enhanced with more pre-1907 records
NEWS 7	SEP 21	CA/CAplus fields enhanced with simultaneous left and right truncation
NEWS 8	SEP 25	CA(SM)/CAplus(SM) display of CA Lexicon enhanced
NEWS 9	SEP 25	CAS REGISTRY(SM) no longer includes Concord 3D coordinates
NEWS 10	SEP 25	CAS REGISTRY(SM) updated with amino acid codes for pyrrolysine
NEWS 11	SEP 28	CEABA-VTB classification code fields reloaded with new classification scheme
NEWS 12	OCT 19	LOGOFF HOLD duration extended to 120 minutes
NEWS 13	OCT 19	E-mail format enhanced
NEWS 14	OCT 23	Option to turn off MARPAT highlighting enhancements available
NEWS 15	OCT 23	CAS Registry Number crossover limit increased to 300,000 in multiple databases
NEWS 16	OCT 23	The Derwent World Patents Index suite of databases on STN has been enhanced and reloaded
NEWS 17	OCT 30	CHEMLIST enhanced with new search and display field
NEWS 18	NOV 03	JAPIO enhanced with IPC 8 features and functionality
NEWS 19	NOV 10	CA/CAplus F-Term thesaurus enhanced
NEWS 20	NOV 10	STN Express with Discover! free maintenance release Version 8.01c now available
NEWS 21	NOV 13	CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS 22	NOV 20	CAS Registry Number crossover limit increased to 300,000 in additional databases
NEWS 23	NOV 20	CA/CAplus to MARPAT accession number crossover limit increased to 50,000
NEWS 24	NOV 20	CA/CAplus patent kind codes will be updated

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8
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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 11:30:09 ON 29 NOV 2006

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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STRUCTURE FILE UPDATES: 27 NOV 2006 HIGHEST RN 914071-04-8
DICTIONARY FILE UPDATES: 27 NOV 2006 HIGHEST RN 914071-04-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> e phosphorodiamidite/cn

E1	1	PHOSPHORODIAMIDIMIDOTHIOIC ACID/CN
E2	1	PHOSPHORODIAMIDIMIDOTHIOIC ACID, N,N'-BIS(4-METHOXYPHENYL)-N''-(2,2,3-TRICHLORO-1-OXOPROPYL)-, 4-CHLOROPHENYL ESTER/CN
E3	0 -->	PHOSPHORODIAMIDITE/CN
E4	1	PHOSPHORODIAMIDO(DITHIOPEROXO)THIOIC ACID, TETRAETHYL-, ETHYL ESTER/CN
E5	1	PHOSPHORODIAMIDODISELENOIC ACID/CN
E6	1	PHOSPHORODIAMIDODISELENOIC ACID, ION(2-)/CN
E7	1	PHOSPHORODIAMIDODISELENOIC ACID, N,N'-BIS(1-METHYLPROPYL)-/CN
E8	1	PHOSPHORODIAMIDODISELENOIC ACID, N,N'-BIS(2-METHYLPROPYL)-/CN
E9	1	PHOSPHORODIAMIDODISELENOIC ACID, N,N'-BIS(2-METHYLPROPYL)-, COMPD. WITH 2-METHYL-1-PROPANAMINE (2:1)/CN
E10	1	PHOSPHORODIAMIDODISELENOIC ACID, N,N'-DI-SEC-BUTYL-, COMPD. WITH SEC-BUTYLAMINE (1:1)/CN
E11	1	PHOSPHORODIAMIDODISELENOIC ACID, N,N'-DI-SEC-BUTYL-, COMPD. WITH SEC-BUTYLAMINE (2:1)/CN
E12	1	PHOSPHORODIAMIDODISELENOIC ACID, N,N'-DIBUTYL-/CN

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.20	2.41

FILE 'CAPLUS' ENTERED AT 11:33:17 ON 29 NOV 2006

FILE COVERS 1907 - 29 Nov 2006 VOL 145 ISS 23
FILE LAST UPDATED: 27 Nov 2006 (20061127/ED)


```
=> s phosphorodiamidite
            76 PHOSPHORODIAMIDITE
            37 PHOSPHORODIAMIDITES
L1          90 PHOSPHORODIAMIDITE
                 (PHOSPHORODIAMIDITE OR PHOSPHORODIAMIDITES)

=> s l1/prep
             0 PHOSPHORODIAMIDITE/CT
       3933759 PREP/RL
L2           0 (PHOSPHORODIAMIDITE/PREP)
                 (PHOSPHORODIAMIDITE/CT (L) PREP/RL)

=> s l1 and (phosphorus trichalide or phosphorus trichloride or phosphorus
triboromide or phosphorus triiodide)
        305627 PHOSPHORUS
             1 PHOSPHORUSES
             2 PHOSPHORI
             8 PHOSPHORIS
        305636 PHOSPHORUS
                 (PHOSPHORUS OR PHOSPHORUSES OR PHOSPHORI OR PHOSPHORIS)
             0 TRICHALIDE
             0 PHOSPHORUS TRICHALIDE
                 (PHOSPHORUS(W)TRICHALIDE)
        305627 PHOSPHORUS
             1 PHOSPHORUSES
             2 PHOSPHORI
             8 PHOSPHORIS
        305636 PHOSPHORUS
                 (PHOSPHORUS OR PHOSPHORUSES OR PHOSPHORI OR PHOSPHORIS)
         39627 TRICHLORIDE
          1104 TRICHLORIDES
         40248 TRICHLORIDE
                 (TRICHLORIDE OR TRICHLORIDES)
          4231 PHOSPHORUS TRICHLORIDE
                 (PHOSPHORUS(W)TRICHLORIDE)
        305627 PHOSPHORUS
             1 PHOSPHORUSES
             2 PHOSPHORI
             8 PHOSPHORIS
        305636 PHOSPHORUS
                 (PHOSPHORUS OR PHOSPHORUSES OR PHOSPHORI OR PHOSPHORIS)
```

```
             0 TRIBOROMIDE
             0 PHOSPHORUS TRIBOROMIDE
                 (PHOSPHORUS(W)TRIBOROMIDE)
        305627 PHOSPHORUS
             1 PHOSPHORUSES
             2 PHOSPHORI
             8 PHOSPHORIS
        305636 PHOSPHORUS
                 (PHOSPHORUS OR PHOSPHORUSES OR PHOSPHORI OR PHOSPHORIS)
          4726 TRIIODIDE
           298 TRIIODIDES
          4841 TRIIODIDE
                 (TRIIODIDE OR TRIIODIDES)
            86 PHOSPHORUS TRIIODIDE
                 (PHOSPHORUS(W)TRIIODIDE)
L3           6 L1 AND (PHOSPHORUS TRICHALIDE OR PHOSPHORUS TRICHLORIDE OR PHOSP
               HORUS TRIBOROMIDE OR PHOSPHORUS TRIIODIDE)

=> d l3 ibib ab 1-6

L3   ANSWER 1 OF 6  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2006:192529  CAPLUS
DOCUMENT NUMBER:          144:432910
TITLE:                    P-Hydrogen-Substituted 1,3,2-Diazaphospholenes:
                          Molecular Hydrides
AUTHOR(S):                Burck, Sebastian; Gudat, Dietrich; Nieger, Martin; Du
                          Mont, Wolf-Walther
CORPORATE SOURCE:         Institut fuer Anorganische Chemie, Universitaet
                          Stuttgart, Stuttgart, 70550, Germany
SOURCE:                   Journal of the American Chemical Society (2006),
                          128(12), 3946-3955
                          CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER:                American Chemical Society
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
OTHER SOURCE(S):          CASREACT 144:432910
AB   P-Hydrogen-substituted 1H-2,3-dihydro-1,3,2-diazaphospholes were prepared by
     lithium reduction of diazadienes with subsequent protonation and cyclization
     with PCl3; the diazaphospholenes reduce ketones to
     phosphorodiamidite esters of the corresponding secondary alcs.
     Reaction of R1NHCH2CH:NR1 (6c-e), resulted from Li reduction of the diimines
     R1N:CHCH:NR1 with subsequent protonation, with PCl3 in the presence of
     NEt3 gave 2-chloro-1,3-R12-2,3-dihydro-1H-1,3,2-diazaphospholes (3c-e)
     which were reduced by NaAlR2H2 (R = MeOCH2CH2) to the corresponding P-H
     derivs. (1a-c; R1 = tBu, mesityl, 2,6-iPr2C6H3). A unique hydride-type
     P-H reactivity of the new diazaphospholenes was documented by extensive
     reactivity studies. Aldehydes and ketones were readily reduced to
     diazaphospholene derivs. of the corresponding alcs., with
     alkyl-substituted ketones being converted at much lower rates than
     aldehydes or diaryl ketones. Reactions with the group 14 element
     tetrachlorides proceed via hydride/chloride metathesis to give either
     partially chlorinated derivs. EHnCl4-n (n = 0-3 for E = C, Si) or HCl and
     2-phospholenium salts with ECl3- anions (for E = Ge, Sn) which were
     characterized by spectroscopic and x-ray diffraction studies. Tin
     dichloride was readily reduced to the elemental tin. Reactions of 1c with
     the P-chloro-diazaphospholene 3c and the salt 1,3-di-tert-butyl-1,3-diaza-
     2-phospholenium triflate 16c[OTf] allowed the first exptl. detection of
     intermol. exchange of a hydride, rather than a proton, between phosphine
     derivs. Computational studies indicated that the hydride transfer between
     1c and the cation 16c involves a transient H-bridged species with bonding
     properties similar to those of B2H7-. The preference for the formation of
     these bridged intermediates over P-P bonded phosphenium-phosphine adducts
     is attributed to the low electrophilicity of the diazaphospholenium
     cations and characterizes a novel reaction mode for phosphenium ions.
```

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1993:254098 CAPLUS
DOCUMENT NUMBER: 118:254098
TITLE: A convenient synthesis of amides with 2-halo-2,3-dihydro-1,3,4,2-oxadiazaphospholes as new condensing agents
AUTHOR(S): Kimura, Hiroshi; Konno, Hodetoshi; Takahashi, Naomichi
CORPORATE SOURCE: Fac. Eng., Yamagata Univ., Yonezawa, 992, Japan
SOURCE: Bulletin of the Chemical Society of Japan (1993), 66(1), 327-9
CODEN: BCSJA8; ISSN: 0009-2673
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 118:254098
AB Various amides, including some with bulky substituents, are prepared in good yields from free caboxylic acids and amines under mild conditions by a one-step method using new condensing agents halodihydrooxadiazaphospholes I (R = H, Me, Et, X = Cl, Br). Phosphorodiamidites I (X = amino group) are formed initially.

L3 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:247640 CAPLUS
DOCUMENT NUMBER: 114:247640
TITLE: Synthesis of deoxydinucleoside phosphorodithioates
AUTHOR(S): Brill, Wolfgang K. D.; Nielsen, John; Caruthers, Marvin H.
CORPORATE SOURCE: Dep. Chem. Biochem., Univ. Colorado, Boulder, CO, 80309-0215, USA
SOURCE: Journal of the American Chemical Society (1991), 113(10), 3972-80
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The synthesis of a new class of DNA analogs called phosphorodithioate DNA is described. This analog, which has a deoxynucleoside-OPS2O-deoxynucleoside internucleotide linkage, is isosteric and isopolar with the normal phosphodiester, inert toward nucleases, and potentially useful for a large number of biochem. and biol. applications. Two methods are described for synthesizing this derivative One route begins by condensing a deoxynucleoside phosphorodiamidite with a second appropriately protected deoxynucleoside to yield a deoxydinucleoside phosphoramidite. Sulfhydrolysis with H2S generates the H-phosphonothioate, which upon oxidation with sulfur yields the deoxydinucleoside phosphorodithioate. Alternatively, sequential treatment of the deoxydinucleoside phosphoramidite with a mercaptan and sulfur yields the deoxydinucleoside phosphorodithioate triester. These deoxydinucleotides in protected form can then be used to introduce the dithioate internucleotide linkage into DNA. The second route for generating dithioate DNA uses deoxynucleoside phosphorothioamidities. Two derivs., the deoxynucleoside 3'-N,-N-dimethyl- or 3'-(N,N-tetramethylenephosphorothioamidite), were found to be especially attractive synthons as they could be prepared in stable form via a one-flask synthesis procedure and used to form the deoxydinucleoside thiophosphite rapidly (1-2 min with tetrazole as activator) in high yield. Subsequent oxidation with sulfur generates the completely protected phosphorodithioate linkage.

L3 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:75771 CAPLUS
DOCUMENT NUMBER: 108:75771
TITLE: Improved synthesis of 2-cyanoethyl N,N,N',N'-tetraisopropylphosphorodiamidite

(iPr2N)2POCH2CH2CN)
AUTHOR(S): Nielsen, John; Dahl, Otto
CORPORATE SOURCE: Dep. Gen. Org. Chem., Univ. Copenhagen, Copenhagen, DK-2100, Den.
SOURCE: Nucleic Acids Research (1987), 15(8), 3626
CODEN: NARHAD; ISSN: 0305-1048
DOCUMENT TYPE: Journal
LANGUAGE: English
AB PCl3 was treated with HOCH2CH2CN in MeCN to give Cl2POCH2CH2CN which was treated with (Me2CH)2NH to give, after vacuum distillation, 45% of the title compound (I) >99% pure. I is a useful alternative to Cl[(Me2CH)2N]POCH2CH2CN for the synthesis of nucleoside cyanoethyl N,N-diisopropylphosphoramidites.

L3 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1978:443956 CAPLUS
DOCUMENT NUMBER: 89:43956
TITLE: Cholesteryl phosphite and related compounds
AUTHOR(S): Cremlyn, R. J. W.; Akhtar, N.; Khattak, I.
CORPORATE SOURCE: Sch. Nat. Sci., Hatfield Polytech., Hatfield/Hertfordshire, UK
SOURCE: Phosphorus and Sulfur and the Related Elements (1978), 4(2), 205-9
CODEN: PREEDF; ISSN: 0308-664X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Cholesterol (ROH, R = cholesteryl) was treeated with PCl3 to give 70% ROPCl2, which was treated with 2 equivalent PhNH2 to give ROPClNHPh (I). The hydrolysis of I gave ROP(O)HNHPh, whereas the condensation of I with morpholine and PhNHNH2 gave ROPR1NHPh (R1 = morpholino) and ROP(NHPh)NHNHPh, resp. Treatment of ROPCl2 with 4 equivalent PhNH2 gave ROP(NHPh)2. Treating ROPCl2 with refluxing EtOH gave ROH, but reaction in EtOH at room temperature or in the presence of base gave ROH and ROP(Et)2. Similarly, ROPCl2 in boiling H2O gave only ROH, but at room temperature ROP(O)HOH was also obtained.

L3 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1974:519849 CAPLUS
DOCUMENT NUMBER: 81:119849
TITLE: Novel and versatile synthetic reagent. Monoalkyl esters of tetraalkylphosphorodiamidous acid
AUTHOR(S): Hargis, J. H.; Alley, W. D.
CORPORATE SOURCE: Dep. Chem., Auburn Univ., Auburn, AL, USA
SOURCE: Journal of the American Chemical Society (1974), 96(18), 5927-8
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Esters (Me2N)2POR (R = Me, PhCH2) have been shown to react rapidly and in good yield with polyhalogenated hydrocarbons CCl4, PhCCl3, and CCl3CO2Et to give RCCl3, RCCl2Ph, and RCCl2CO2Et. A mechanism involving nucleophilic attack of P upon Cl is suggested.

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	41.57	43.98
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-4.50	-4.50

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DICTIONARY FILE UPDATES: 27 NOV 2006 HIGHEST RN 914071-04-8

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REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

```
=> e 2-cyanothyl tetraisopropyl phosphorodiamidite/cn
E1            1     2-CYANOTHIOACETAMIDE/CN
E2            1     2-CYANOTHIOPHENE/CN
E3            0 --> 2-CYANOTHYL TETRAISOPROPYL PHOSPHORODIAMIDITE/CN
E4            1     2-CYANOTOLUENE/CN
E5            1     2-CYANOTROPONE/CN
E6            1     2-CYANOVALERALDEHYDE/CN
E7            1     2-CYANOVALERIC ACID/CN
E8            1     2-CYANOVINYL/CN
E9            1     2-CYANOXANTHENE/CN
E10           1     2-CYCLO OCTABENZENECARBOXYLIC ACID, 5,6,7,8,9,10-HEXAHYDRO-3
                    -HYDROXY-/CN
E11           1     2-CYCLO OCTEN-1-OL, 2-PHENYL-, ACETATE/CN
E12           1     2-CYCLO OCTEN-1-YLAMINE, N,N-DIMETHYL-, PICRATE/CN

=> e 2-cyanoethyl tetraisopropyl phosphorodiamidite/cn
E1            1     2-CYANOETHYL SULFIDE/CN
E2            1     2-CYANOETHYL TERT-BUTYL SULFIDE/CN
E3            0 --> 2-CYANOETHYL TETRAISOPROPYL PHOSPHORODIAMIDITE/CN
E4            1     2-CYANOETHYL TETRAISOPROPYLPHOSPHORODIAMIDITE/CN
E5            1     2-CYANOETHYL VINYL ETHER/CN
E6            1     2-CYANOETHYL VINYL KETONE/CN
E7            1     2-CYANOETHYL(2-CHLOROETHYL)AMINE/CN
E8            1     2-CYANOETHYL(3-HYDROXYPROPYL)METHYLSILANOL/CN
E9            1     2-CYANOETHYL-(2-ACETOXYETHYL)AMINE/CN
E10           1     2-CYANOETHYL-2-PHENYLCYCLOHEX-3-EN-1-ONE/CN
E11           1     2-CYANOETHYL-5-NORBORNENE-2-CARBOXALDEHYDE/CN
E12           1     2-CYANOETHYL-N,N,N1,N1-TETRAISOPROPYLPHOSPHORODIAMIDITE/CN

=> s 2-cyanoethyl tetraisopropyl phosphorodiamidite
      21138556 2
         38896 CYANOETHYL
           621 TETRAISOPROPYL
           187 PHOSPHORODIAMIDITE
L4           1 2-CYANOETHYL TETRAISOPROPYL PHOSPHORODIAMIDITE
                 (2(W)CYANOETHYL(W)TETRAISOPROPYL(W)PHOSPHORODIAMIDITE)

=> d l4

L4   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2006 ACS on STN
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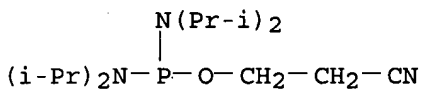
RN 102691-36-1 REGISTRY
ED Entered STN: 14 Jun 1986
CN Phosphorodiamidous acid, tetrakis(1-methylethyl)-, 2-cyanoethyl ester (9CI) (CA INDEX NAME)
OTHER NAMES:
CN β-Cyanoethyl N,N,N',N'-tetraisopropylphosphordiamidite
CN β-Cyanoethyl-N,N,N',N'-tetraisopropyldiamidophosphite
CN 2-Cyanoethoxybis(N,N-diisopropylamino)phosphine
CN 2-Cyanoethyl N,N,N',N'-tetraisopropylphosphorodiamidite
CN 2-Cyanoethyl tetraisopropylphosphorodiamidite
CN 2-Cyanoethyl-N,N,N1,N1-tetraisopropylphosphorodiamidite
CN Bis(diisopropylamino)(2-cyanoethoxy)phosphine
CN Bis(diisopropylamino)-2-cyanoethoxyphosphane
DR 864837-13-8
MF C15 H32 N3 O P
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CSCHEM, MEDLINE, MSDS-OHS, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

802 REFERENCES IN FILE CA (1907 TO DATE)
804 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	22.70	66.68

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-4.50

FILE 'CAPLUS' ENTERED AT 11:40:50 ON 29 NOV 2006

FILE COVERS 1907 - 29 Nov 2006 VOL 145 ISS 23
FILE LAST UPDATED: 27 Nov 2006 (20061127/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

http://www.cas.org/infopolicy.html

=> s \102691-36-1
L5 804 \102691-36-1
(102691-36-1)

=> s 102691-36-1
REG1stRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L7 804 L6

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.41	72.40

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-4.50

FILE 'CAPLUS' ENTERED AT 11:42:07 ON 29 NOV 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 29 Nov 2006 VOL 145 ISS 23
FILE LAST UPDATED: 27 Nov 2006 (20061127/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/infopolicy.html

=> s l7/prep
FIELD CODES CANNOT BE CHANGED HERE
You may have tried to apply a field code to a term that already has a field code. You can only add a field code to a term that has no field code appended to it.

=> s l7
L8 804 L6

=> s l8/prep
FIELD CODES CANNOT BE CHANGED HERE

```
You may have tried to apply a field code to a term that already has a
field code.  You can only add a field code to a term that has no field
code appended to it.

=> s l8 and (phosphorus trichalide or phosphorus trichloride or phosphorus
triboromide or phosphorus triiodide)
        305627 PHOSPHORUS
             1 PHOSPHORUSES
             2 PHOSPHORI
             8 PHOSPHORIS
        305636 PHOSPHORUS
                 (PHOSPHORUS OR PHOSPHORUSES OR PHOSPHORI OR PHOSPHORIS)
             0 TRICHALIDE
             0 PHOSPHORUS TRICHALIDE
                 (PHOSPHORUS(W)TRICHALIDE)
        305627 PHOSPHORUS
             1 PHOSPHORUSES
             2 PHOSPHORI
             8 PHOSPHORIS
        305636 PHOSPHORUS
                 (PHOSPHORUS OR PHOSPHORUSES OR PHOSPHORI OR PHOSPHORIS)
         39627 TRICHLORIDE
          1104 TRICHLORIDES
         40248 TRICHLORIDE
                 (TRICHLORIDE OR TRICHLORIDES)
          4231 PHOSPHORUS TRICHLORIDE
                 (PHOSPHORUS(W)TRICHLORIDE)
        305627 PHOSPHORUS
             1 PHOSPHORUSES
             2 PHOSPHORI
             8 PHOSPHORIS
        305636 PHOSPHORUS
                 (PHOSPHORUS OR PHOSPHORUSES OR PHOSPHORI OR PHOSPHORIS)
             0 TRIBOROMIDE
             0 PHOSPHORUS TRIBOROMIDE
                 (PHOSPHORUS(W)TRIBOROMIDE)
        305627 PHOSPHORUS
             1 PHOSPHORUSES
             2 PHOSPHORI
             8 PHOSPHORIS
        305636 PHOSPHORUS
                 (PHOSPHORUS OR PHOSPHORUSES OR PHOSPHORI OR PHOSPHORIS)
          4726 TRIIODIDE
           298 TRIIODIDES
          4841 TRIIODIDE
                 (TRIIODIDE OR TRIIODIDES)
            86 PHOSPHORUS TRIIODIDE
                 (PHOSPHORUS(W)TRIIODIDE)
L9           11 L8 AND (PHOSPHORUS TRICHALIDE OR PHOSPHORUS TRICHLORIDE OR PHOSP
                HORUS TRIBOROMIDE OR PHOSPHORUS TRIIODIDE)

=> d his

     (FILE 'HOME' ENTERED AT 11:30:09 ON 29 NOV 2006)

     FILE 'REGISTRY' ENTERED AT 11:30:22 ON 29 NOV 2006
               E PHOSPHORODIAMIDITE/CN

     FILE 'CAPLUS' ENTERED AT 11:33:17 ON 29 NOV 2006
L1           90 S PHOSPHORODIAMIDITE
L2            0 S L1/PREP
L3            6 S L1 AND (PHOSPHORUS TRICHALIDE OR PHOSPHORUS TRICHLORIDE OR PH

     FILE 'REGISTRY' ENTERED AT 11:38:12 ON 29 NOV 2006
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                E 2-CYANOTHYL TETRAISOPROPYL PHOSPHORODIAMIDITE/CN
                E 2-CYANOETHYL TETRAISOPROPYL PHOSPHORODIAMIDITE/CN
L4            1 S 2-CYANOETHYL TETRAISOPROPYL PHOSPHORODIAMIDITE

     FILE 'CAPLUS' ENTERED AT 11:40:50 ON 29 NOV 2006
L5          804 S \102691-36-1
                S 102691-36-1/REG#

     FILE 'REGISTRY' ENTERED AT 11:41:57 ON 29 NOV 2006
L6            1 S 102691-36-1/RN

     FILE 'CAPLUS' ENTERED AT 11:41:57 ON 29 NOV 2006
L7          804 S L6

     FILE 'CAPLUS' ENTERED AT 11:42:07 ON 29 NOV 2006
L8          804 S L7
L9           11 S L8 AND (PHOSPHORUS TRICHALIDE OR PHOSPHORUS TRICHLORIDE OR PH

=> s l9 not l3
L10         10 L9 NOT L3

=> d l10 ibib ab 1-10

L10  ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2004:534215  CAPLUS
DOCUMENT NUMBER:          141:71721
TITLE:                    Process for the preparation of phosphitylation agents
INVENTOR(S):              Hardy, Jonathan Mark; Dinizo, Stephan Edward
PATENT ASSIGNEE(S):       Avecia Limited, UK
SOURCE:                   PCT Int. Appl., 11 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    --------------------     --------
     WO 2004055030         A1    20040701    WO 2003-GB5473           20031216
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO,
             NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
             TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
             BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
             ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
             TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     CA 2510473            AA    20040701    CA 2003-2510473          20031216
     AU 2003288555         A1    20040709    AU 2003-288555           20031216
     EP 1575965            A1    20050921    EP 2003-780393           20031216
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     CN 1726220            A     20060125    CN 2003-80106244         20031216
     JP 2006509813         T2    20060323    JP 2004-559906           20031216
     US 2006173187         A1    20060803    US 2006-539210           20060206
PRIORITY APPLN. INFO.:                       US 2002-433788P      P   20021217
                                             WO 2003-GB5473       W   20031216
OTHER SOURCE(S):          CASREACT 141:71721; MARPAT 141:71721
AB   A process for the preparation of a compound of formula R1-Y1-P(NR2R3 )2 is
     provided.  The process comprises reacting a compound of formula PX3 with a
     compound of formula HNR2R3 to form a compound of formula X-P(NR2R3)2; and
     reacting the compound of formula X-P(NR2R3)2 with a compound of formula
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R1-Y1-H in the presence of a hydrocarbon solvent to form the compound of formula R1-Y1-P(NR2R3)2. R1 represents a phosphorus protecting group; R2 and R3 each independently represent an alkyl, preferably a C1-6alkyl, group, or R2 and R3 are joined, together with the N to which they are attached, to form a 5-7 membered ring; Y1 represents O or S, preferably O; and X represents a halogen, preferably Cl. The preferred solvent is toluene. Thus, reaction of diisopropylamine with PCl3 in PhMe at 100-110 for 24 h. gave [(Me2CH)2N]2PCl which on treatment with HOCH2CH2CN in PhMe in the presence of Et3N gave title compound, [(Me2CH)2N]2POCH2CH2CN.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:1006992 CAPLUS
DOCUMENT NUMBER: 140:42305
TITLE: Process of preparation of phosphordiamidite compounds from 2-(cyanoethoxy)dichlorophosphine
INVENTOR(S): Shamblee, Dwight; Wo, Shiming; Wang, Bing
PATENT ASSIGNEE(S): Rhodia, Inc., USA
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003106468	A1	20031224	WO 2003-US17982	20030609
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2487036	AA	20031224	CA 2003-2487036	20030609
US 2003236233	A1	20031225	US 2003-457177	20030609
US 7034177	B2	20060425		
AU 2003243432	A1	20031231	AU 2003-243432	20030609
EP 1539772	A1	20050615	EP 2003-760241	20030609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1659173	A	20050824	CN 2003-813513	20030609
JP 2005529957	T2	20051006	JP 2004-513299	20030609
PRIORITY APPLN. INFO.:			US 2002-388224P P	20020613
			WO 2003-US17982 W	20030609

OTHER SOURCE(S): CASREACT 140:42305; MARPAT 140:42305
AB A process of producing cynoalkyl tetraalkylphosphordiamidites at least substantially free of amine hydrohalide with improved storage stability. Thus, reaction of 2-(cyanoethoxy)dichlorophosphine with diisopropylamine in THF followed by passing through alumina gave 88.5% pure 2-cyanoethyl-N,N,N',N'-tetraisopropylphosphorodiamidite.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1993:147630 CAPLUS
DOCUMENT NUMBER: 118:147630
TITLE: Research on chemical reagents for the syntheses of DNA fragment - preparation of 2-cyanoethyl

bis(N,N-diisopropyl) phosphoamidite

AUTHOR(S): Yan, Rulian; Zhang, Siqian; Liu, Zhenyang; Sun, Shunneng; Zong, Jianchao; Yu, Yaoting

CORPORATE SOURCE: Tianjin Res. Inst. Chem. Reagents, Tianjin, 300050, Peop. Rep. China

SOURCE: Huaxue Shiji (1992), 14(4), 237-8
CODEN: HUSHDR; ISSN: 0258-3283

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

OTHER SOURCE(S): CASREACT 118:147630

AB Stirring 2-cyanoethanol with PCl3 in MeCN gave 95% NCCH2CH2OPCl2, which was treated with diisopropylamine in Et2O to give 86% NCCH2CH2OP(NCHMe2)2.

L10 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:472155 CAPLUS

DOCUMENT NUMBER: 115:72155

TITLE: Nucleoside and polynucleotide thiophosphoramidite and phosphorodithioate compounds and processes

INVENTOR(S): Caruthers, Marvin H.; Brill, Wolfgang; Nielsen, John; Yau, Eric; Ma, Yun Xi

PATENT ASSIGNEE(S): University Patents, Inc., USA

SOURCE: PCT Int. Appl., 87 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9104983	A1	19910418	WO 1990-US5653		19901004
W: AU, JP, US					
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE					
AU 9066036	A1	19910428	AU 1990-66036		19901004
PRIORITY APPLN. INFO.:			US 1989-417387	A2	19891005
			US 1990-488805	A2	19900303
			WO 1990-US5653	A	19901004

OTHER SOURCE(S): MARPAT 115:72155

AB Nucleoside thiophosphoramidites [I or II; B = (deoxy)nucleoside base; A = H, OH, halo, SH, NH2, N3, OR2, SR2, NHR2; R2 = heteroatom-(un)substituted blocking group; R1 = blocking group; M = SR5; X = NR6R7; R5-R7 = heteroatom-(un)substituted (cyclo)alkyl, aryl, aralkyl, cycloalkylalkyl, (cyclo)alkenyl, aralkenyl, (cyclo)alkynyl, aralkynyl; R6R7 = C≤5 alkylene; NR6R7 = N-heterocyclyl containing ≥1 addnl. heteroatom selected from N, O, and S], useful for synthesizing mononucleotides and polynucleotides having phosphorodithioate, phosphorothioamidate, phosphorothiotriester, and phosphorothioate internucleotide linkages, are prepared Thus, 2.5 mol (Me2CH)2NH was added slowly to a vigorously stirred and cooled (-18°) solution of 0.5 mol PCl3 in THF and the reaction mixture refluxed for 12 h and, after removing (Me2CH)2NH.HCl, for addnl. 12 h to give, after crystallization from hexane, [(Me2CH)2N]2PCl (III), as a colorless crystalline solid. p-ClC6H4CH2SH (50 mmol) was treated with 50 mmol NaH in Et2O with stirring and after 2 h 50 mmol III was added and the reaction mixture stirred at room temperature for 4 h to give, after recrystn. from MeCN, p-ClC6H4CH2SP[N(CHMe2)2]2 (IV). To a suspension of 5 mmol 5'-O-(di-p-anisylphenylmethyl)thymidine and 6 mmol IV in MeCN was added 10 mmol tetrazole and the reaction mixture was stirred at room temperature for 16 h to give 80.1% I [B = 1-thyminyl, A = H, R1 = di-p-anisylphenylmethyl (DMT), M = SCH2C6H4Cl-p, X = N(CHMe2)2]. This (0.2 mmol) was coupled with 3'-O-acetylthymidine in DMF containing nitrophenyltetrazole and, after 15 min, quenched with 1 mmol S to give dinucleotide phosphorodithioate (V).

L10 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:235777 CAPLUS
DOCUMENT NUMBER: 112:235777
TITLE: Nucleoside and polynucleotide thiophosphoramidite and phosphorodithioate compounds and processes
INVENTOR(S): Caruthers, Marvin; Brill, Wolfgang; Nielsen, John
PATENT ASSIGNEE(S): University Patents, Inc., USA
SOURCE: PCT Int. Appl., 90 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 8911486	A1	19891130	WO 1989-US2293		19890525
W: AU, DK, FI, JP, KR, NO, SU					
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE					
IL 110600	A1	19960131	IL 1989-110600		19890519
ZA 8903840	A	19901228	ZA 1989-3840		19890522
AU 8937392	A1	19891212	AU 1989-37392		19890525
AU 626305	B2	19920730			
EP 378615	A1	19900725	EP 1989-906571		19890525
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE					
JP 03501128	T2	19910314	JP 1989-506397		19890525
ES 2015665	A6	19900901	ES 1989-1786		19890526
US 5278302	A	19940111	US 1991-793171		19911118
US 5453496	A	19950926	US 1993-138140		19931015
US 5695979	A	19971209	US 1995-411474		19950328
PRIORITY APPLN. INFO.:			US 1988-198886	A	19880526
			US 1989-314011	A	19890222
			US 1989-332247	B2	19890331
			IL 1989-90359	A3	19890519
			WO 1989-US2293	A	19890525
			US 1990-545238	B1	19900627
			US 1991-793171	A1	19911118
			US 1993-138140	A3	19931015

OTHER SOURCE(S): MARPAT 112:235777
AB Mononucleotides (I, II; R = PXM; B = (deoxy)nucleoside base; A = H, halo, N3 or (un)protected SH, OH, or NH2; R1 = protecting group; M = S or SR8; R8 = alkyl, aryl, aralkyl, alkynyl, etc.; X = NR6R7 = Rr6, R7 = heteroatom (un)substituted (cyclo)alkyl, aryl, aralkyl, or (cyclo)alkynyl); or R6R7 = C≤6 alkylene) and dinucleotides I (R = Q; R1 = protecting group; X1 = H, R5S NHR6, or NR6R7, and R3, R5 = protecting group; or R1 = protecting group, X4 = R5S, NHR6, or NR6R7, and R3 = P(OR4)NR6R7; or R1 = P(OR4)NR6R7, X1 = R5S, NHR6, or NR6R7, and R3 = protecting group), which are useful as intermediates for mononucleotides and polynucleotides having phosphorodithioate, phosphorothioamidate, phosphorothiotriester, and phosphorothioate intermediate linkages which have many biol., therapeutic, and diagnostic applications (e.g. antiviral, antitumor, and antibacterial agents) (no data), are prepared Thus, reaction of I [R = H; B = N4-toluoylcytosinyl; A = H; R1 = 4,4'-dimethoxytrityl(DMT)] with [(Me2CH)2N]2PCl in THF containing Et3N followed by I (R = PhOCH2CO; B = same as above, A = R1 = H) in MeCN in the presence of tetrazole gave I (R == Q1; B = same as above; A = H; R1 = DMT). Treatment of the latter with 4-ClC6H4CH2SH and tetrazole in THF under Me and oxidation of the resulting thiophosphite with 0.4M S in PhMe/lutidine gave I (R = Q; B = same as above; A = H; R1 = DMT; X1 = 4-ClC6H4S; R3 = PhOCH2CO). Five polynucleotides containing phosphorodithiolate linkage, e.g. dCCpCxCpCpCpCpCpCpCpCpCpCxCpC) (x = phosphorodithiolate linkage) were prepared (no characterization given).

L10 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1989:497663 CAPLUS
DOCUMENT NUMBER: 111:97663
TITLE: Phosphoramidate analogs of dinucleotides: synthesis and proton assignment by two dimensional NMR spectroscopy (proton,proton-COSY)
AUTHOR(S): Mag, Matthias; Engels, Joachim W.
CORPORATE SOURCE: Inst. Org. Chem., Johann Wolfgang Goethe-Univ., Frankfurt, D-6000/50, Fed. Rep. Ger.
SOURCE: Nucleosides & Nucleotides (1988), 7(5-6), 725-8
CODEN: NUNUD5; ISSN: 0732-8311
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 111:97663

AB The synthesis of several dinucleoside phosphate derivs. (e.g., I, DMTr = dimethoxytrityl) which are linked by phosphoramidate bonds 3'-OP(O)NH-5' are described. One of these dimer units can be used in automated solid phase DNA synthesis by the phosphoramidite procedure. In order to study the conformational change which is induced on substituting O-P-O by O-P-N, fully deprotected I was also prepared The constitution of the dimer units was confirmed by means of 2D-300MHz homonuclear chemical shift correlation spectroscopy (1H,1H-COSY).

L10 ANSWER 7 OF 10 CAPLUS
ACCESSION NUMBER: 1989:434935 CAPLUS
DOCUMENT NUMBER: 111:34935
TITLE: Thermodynamic comparison of the base pairs formed by the carcinogenic lesion O6-methylguanine with reference both to Watson-Crick pairs and to mismatched pairs
AUTHOR(S): Gaffney, Barbara L.; Jones, Roger A.
CORPORATE SOURCE: Dep. Chem., Rutgers, State Univ. New Jersey, Piscataway, NJ, 08855, USA
SOURCE: Biochemistry (1989), 28(14), 5881-9
CODEN: BICHAW; ISSN: 0006-2960
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A set of 10 non-self-complementary nonadeoxyribonucleoside octaphosphates, d(GGTTXTTGG) and d(CCAAYAACC), where X and Y are A, C, G, T, or O6-methylguanine (O6MeG), was synthesized by a large-scale, automated, phosphoramidite procedure. Purification was effected by reversed-phase HPLC, and the base composition was verified by anal. HPLC after enzymic degradation to the constituent deoxynucleosides. This set of mols. was designed to allow evaluation of the nearest-neighbor dependence of each base pair. The thermal stability, expressed as Tmax, of each duplex containing one of the O6MeG base pairs, a Watson-Crick pair, or one of the mismatches possible with this set of mols. was determined over a concentration range of 5.7 to 200 μM. From these data the ΔH°, ΔS°, and ΔG° of each combination were calculated In general, the relative thermal stabilities observed for the O6MeG combinations confirm the previous findings that the most stable base pair is formed with cytosine rather than thymine and that all O6MeG pairs are much weaker than Watson-Crick base pairs. Moreover, the nine combinations containing O6MeG are all of similar thermal stability, cover a much smaller range in Tmax than do the mismatches, and show little sequence dependence.

L10 ANSWER 8 OF 10 CAPLUS
ACCESSION NUMBER: 1988:549798 CAPLUS
DOCUMENT NUMBER: 109:149798
TITLE: Cyanoethoxybis(dialkylamino)phosphines
INVENTOR(S): Tawara, Shinichiro; Goto, Kuniaki; Hayakawa, Yoshihiro
PATENT ASSIGNEE(S): Nippon Zeon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62212394	A2	19870918	JP 1986-53306	19860311

PRIORITY APPLN. INFO.: JP 1986-53306 19860311

AB NC(CH2)2OPXY (I; X, Y = secondary amino) are useful for synthesis of P-containing compds., e.g., nucleoside phosphoramidites. Thus, treating 1 equiv PCl3 with 4 equiv Et2NH at room temperature gave (Et2N)2PCl, 10 mmol of which was dissolved in 20 mL Et2O and stirred with 10 mmol β-cyanoethanol and 10 mmol pyridine at room temperature to give 72 mol% I (X = Y = Et2N).

L10 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:549797 CAPLUS
DOCUMENT NUMBER: 109:149797
TITLE: Phosphorodiamidous acid ester derivatives
INVENTOR(S): Tawara, Shinichiro; Goto, Kuniaki; Hayakawa, Yoshihiro
PATENT ASSIGNEE(S): Nippon Zeon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62212395	A2	19870918	JP 1986-53305	19860311

PRIORITY APPLN. INFO.: JP 1986-53305 19860311

AB R3OP(NR1R2)2 (I; R1, R2 = secondary or tertiary alkyl; NR1R2 may be a ring; R3O = OH-derived protective group), useful in polynucleotide synthesis, are prepared by amination of PX3 (X = halo) and treating the resultant XP(NR1R2)2 with R3OH. Thus, stirring 28.6 mmol PCl3 with 114.4 mmol diisopropylamine in Et2O at room temperature for 20 h gave 70% [(Me2CH)2N]2PCl, 20 mmol of which was stirred with 20 mmol Et3N and 20 mmol allyl alc. in Et2O at room temperature for 15 h to give 47% I (R1 = R2 = Me2CH, R3 = allyl).

L10 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1987:407599 CAPLUS
DOCUMENT NUMBER: 107:7599
TITLE: A simple and effective chemical phosphorylation procedure for biomolecules
AUTHOR(S): Bannwarth, Willi; Trzeciak, Arnold
CORPORATE SOURCE: Cent. Res. Units, F. Hoffmann-La Roche Co., Ltd., Basel, CH-4002, Switz.
SOURCE: Helvetica Chimica Acta (1987), 70(1), 175-86
CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A general chemical phosphorylation method based on P(III) reactions was developed. PCl3 was treated with an alc. to give an alkoxydichlorophosphine which was treated with amines to give alkoxybis(dialkylamino)phosphines. These were then treated with an alc. to give give dialkoxy(dialkylamino)phosphines which were used for the phosphorylation of oligonucleotides, peptides and amino acids.